Abstract of the Disclosure

USE OF A THERMAL LIMIT CURVE WITH A TIME OVERCURRENT CURVE TO PROVIDE THERMAL PROTECTION IN A PROTECTIVE RELAY

An overcurrent protective relay includes means for obtaining current values from a power line which are adjusted for application to and use by a processor portion of the relay. The processor evaluates the adjusted power line current values against an overcurrent curve by which, as the current increases from a continuous rating, the time to trip decreases. A thermal limit I^2t curve is combined with the time overcurrent curve, the curves being arranged so that the thermal limit curve crosses over the time overcurrent curve at a selected current value. In such a case, the thermal limit curve controls the time to trip for current fault values above the selected current value and the inverse time overcurrent curve controls the time to trip for fault current values below the selected current value.